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THE FARM INDEX

ECONOMIC RESEARCH SERVICE ☆ U. S. DEPARTMENT OF AGRICULTURE ☆ JANUARY 1964

also in this issue:

Calculating the Odds
for Weather

No Diploma: No Future

Taxes and the Cost of
Marketing

AGRICULTURE 1964 WORLD REPORT



ECONOMIC TRENDS

Item	Unit or base period	'57-'59 Average	1962		1963		
			Year	November	September	October	November
Prices:							
Prices received by farmers	1910-14=100	242	243	244	241	241	241
Crops	1910-14=100	223	230	224	232	234	241
Livestock and products	1910-14=100	258	255	260	249	247	242
Prices paid, interest, taxes and wage rates	1910-14=100	292	306	308	311	311	311
Family living items	1910-14=100	286	294	296	297	297	298
Production items	1910-14=100	262	270	271	273	272	271
Parity ratio		83	79	79	77	77	77
Wholesale prices, all commodities	1957-59=100	—	100.6	100.7	100.3	100.5	100.7
Commodities other than farm and food	1957-59=100	—	100.8	100.7	100.7	100.9	100.9
Farm products	1957-59=100	—	97.7	99.3	95.5	95.1	96.2
Food, processed	1957-59=100	—	101.2	101.3	100.9	102.2	102.5
Consumer price index, all items	1957-59=100	—	105.4	106.0	107.1	107.2	—
Food	1957-59=100	—	103.6	104.1	105.4	104.9	—
Farm Food Market Basket¹							
Retail cost	Dollars	1,037	1,067	1,069	1,082	1,075	—
Farm value	Dollars	410	410	411	390	392	—
Farm-retail spread	Dollars	627	657	658	692	683	—
Farmers' share of retail cost	Per cent	40	38	38	36	37	—
Farm Income:							
Volume of farm marketings	1947-49=100	123	136	176	157	206	183
Cash receipts from farm marketings	Million dollars	32,247	35,921	3,882	3,466	4,517	4,020
Crops	Million dollars	13,766	15,935	2,086	1,785	2,545	2,330
Livestock and products	Million dollars	18,481	19,986	1,796	1,681	1,972	1,690
Realized gross income ²	Billion dollars	—	40.8	—	41.1	—	—
Farm production expenses ²	Billion dollars	—	28.2	—	28.9	—	—
Realized net income ²	Billion dollars	—	12.6	—	12.2	—	—
Agricultural Trade:							
Agricultural exports	Million dollars	4,105	5,031	451	433	553	—
Agricultural imports	Million dollars	3,977	3,876	357	344	383	—
Land Values:							
Average value per acre	1957-59=100	—	—	121 ³	—	—	—
Total value of farm real estate	Billion dollars	—	—	141.6 ³	—	—	—
Gross National Product²							
Consumption ²	Billion dollars	456.7	554.9	556.8	588.7	—	—
Investment ²	Billion dollars	297.3	355.4	356.7	374.9	—	—
Government expenditures ²	Billion dollars	65.1	78.8	78.9	83.7	—	—
Net exports ²	Billion dollars	92.4	117.0	117.0	125.7	—	—
	Billion dollars	1.8	3.8	4.1	4.3	—	—
Income and Spending:							
Personal income, annual rate	Billion dollars	—	442.1	449.9	467.3	471.2	472.8
Total retail sales ⁴	Million dollars	—	19,613	20,112	20,666	20,751	—
Retail sales of food group ⁴	Million dollars	—	4,801	4,860	4,897	4,961	—
Employment and Wages⁴							
Total civilian employment	Millions	—	67.8	67.7	69.1	69.1	69.0
Agricultural	Millions	—	5.2	5.0	4.9	4.9	4.9
Rate of unemployment	Per cent	—	5.6	5.8	5.6	5.5	5.9
Workweek in manufacturing	Hours	—	40.4	40.4	40.7	40.7	40.6
Hourly earnings in manufacturing, unadjusted	Dollars	—	2.39	2.41	2.41	2.47	2.49
Industrial Production⁴	1957-59=100	—	118	120	126	127	127
Manufacturers' Sales Inventories⁵							
Total sales, monthly rate ⁴	Million dollars	—	33,302	33,673	34,672	35,157	—
Total inventories	Million dollars	—	56,665	57,608	59,087	59,408	—
Total new orders, monthly rate	Million dollars	—	33,147	33,165	34,991	35,285	—

¹ Average annual quantities of farm food products based on purchase per wage-earner or clerical-worker family in 1952—estimated monthly. ² Annual rates seasonally adjusted third quarter. ³ As of November 1. ⁴ Seasonally adjusted. ⁵ Revised series.

Sources: U.S. Department of Agriculture (Farm Income Situation, Marketing

and Transportation Situation, Agricultural Prices, Foreign Agricultural Trade and Farm Real Estate Market Developments); U.S. Department of Commerce (Industry Survey, Business News Reports, Advance Retail Sales Report and Survey of Current Business); and U.S. Department of Labor (The Labor Force and Wholesale Price Index).

THE AGRICULTURAL OUTLOOK

The balance sheet of agriculture on January 1, 1964, showed a rise of more than 4 per cent in total assets from the \$216.5 billion a year earlier. Much of the rise reflects increased land values; ownership of livestock and machinery is up somewhat. Production assets per farm are rising rapidly and output per farm is increasing about 5 percent annually, more than offsetting the continuing decline in the number of farms.

U.S. farm output in 1963 rose to a record high, 2 per cent above a year earlier. The rise was generally distributed through the crop and livestock sectors.

Domestic and foreign markets continued to expand last year. Food expenditures by U.S. consumers in 1963 were about 3 per cent above a year ago. Exports of farm products in 1963 were about 8 per cent above the \$5,031 million in 1962. Shipments of most major commodities increased, especially wheat, cotton and dairy products.

Domestic carryover stocks of most major commodities at the end of the current marketing year are expected to be smaller than a year earlier. Wheat stocks may be down one-third by mid-1964.

Stocks of feed grains and dairy products may also be lower. However, a substantial increase is expected in cotton stocks.

Economic activity continued to expand in the closing months of 1963, rounding out a relatively good year for sales, production and employment. Retail sales last year were up almost 5 per cent from 1962. Sales value of new automobiles was up about 12 percent. Sales of most other durable and nondurable goods also gained.

Industrial production in 1963 rose 4.5 per cent from 1962. Output of iron and steel was up more than 10 per cent because of gains in the production of automobiles, machinery and other metal products. Construction of residential and industrial buildings rose 5 per cent.

An additional 800,000 persons were employed last year compared with 1962, reflecting the generally strong demand for goods and services. However, the labor force also expanded and the unemployment rate averaged slightly above the 5.6 per cent of a year earlier.

Most key indicators of economic activity point to continued expansion in the coming months. Housing starts have been at record levels in the past few months. New contracts for commercial and industrial construction have been at high rates. New orders for machine tools have been above year-earlier levels, as have new orders received by all manufacturers.

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COMMODITY HIGHLIGHTS

Beef production will continue large in the first quarter of 1964. Prices of fat cattle likely will remain \$1 to \$2 below the January-March 1963 average of \$25.28 (Choice steers at Chicago). The number of cattle slaughtered will be up and average liveweights are expected to continue heavy. First quarter hog slaughter probably will be above the same quarter a year earlier and prices somewhat below. Slaughter of sheep and lambs in the first quarter is expected to average below 1963 but prices may be little changed.

Milk production during January-March 1964 will likely be below a year earlier, on a daily basis. The quantity of manufactured dairy products

acquired under CCC programs this quarter is expected to drop moderately from a year ago. Prices farmers receive for all milk at wholesale during January-March are expected to be slightly above a year ago.

Egg production in 1964 is expected to be up a little from last year; most of the rise may be in the first half. A higher rate of lay in the first quarter and a greater number of layers in the second quarter is anticipated. Egg prices for the first half will likely be below 1963 because of the larger production.

Another increase in broiler production is likely this year. Recent hatchery activity indicates that production during the first quarter will be significantly above a year earlier. However, output in the second quarter may be limited by lower first quarter prices and competition from beef.

A small to moderate rise in turkey production is expected in 1964. Reasons: Higher prices last year than in 1962, an apparent increase in production efficiency and a breeder flock large enough to support a sizeable increase. A moderately larger turkey crop than in 1963 would probably command a price about as high as in 1963.

Exports of wheat continue to run well above the level of a year ago. Exports in July-November 1963 were about 100 million bushels above the 221 million a year earlier. Prices received by farmers leveled in November after rising sharply from September. However, prices continue high relative to the 1963 loan rate.

Feed grain production was estimated in December at 153 million tons, 10 million above 1962. Both acreage and yield per acre increased about 4 per cent. The 62.5 million tons carried over into 1963-64 was 9 million less than a year earlier. Although the feed grain supply is up slightly, use is also increasing. Carryover stocks may be down to 60 million tons by the end of the marketing year.

Feed grain prices declined 9 per cent from September to November with the harvesting of the record corn crop. The mid-November index of feed grain prices, however, was 7 per cent above

a year earlier. High-protein feed prices were about 5 per cent higher last October and November than in 1962, reflecting continued strong domestic and foreign demand.

Prices to soybean growers average \$2.61 per bushel during October-November 1963, about 35 cents above the same months in 1962. Prices are expected to continue strong throughout the 1963-64 marketing year; all of the 1963 crop probably will be needed to meet domestic and export demand. Soybean oil prices have declined somewhat since October, while soybean meal prices have remained relatively stable. Record disappearance during 1963-64 is expected for both soybean oil and meal. Nevertheless, soybean oil stocks will continue heavy.

Supplies of canned and frozen vegetables into mid-1964 will be only slightly smaller than a year earlier. Potato supplies are a little larger than in 1963. Sweet potato supplies this spring will be smaller than a year ago and prices are expected to be moderately higher.

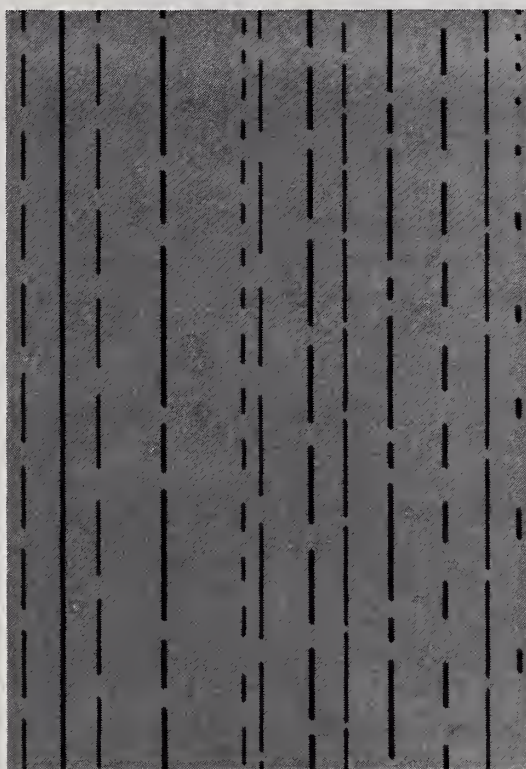
Supplies of most fresh fruits are expected to be somewhat smaller this winter than last with reductions in pears, grapes, oranges and grapefruit. Apple and lemon supplies are larger. Supplies of canned and frozen fruits and frozen fruit juices, especially orange concentrate, are smaller this winter than a year ago. Retail prices of most fresh and processed fruits are expected to continue above year-earlier levels.

Cotton carryover on August 1, 1963, totaled 11.2 million bales. This was over 3 million bales more than a year earlier and the largest since 1957. A further increase is expected this season because the large 1963 crop exceeds expected disappearance.

As of December 1, the 1963 crop was estimated at 15.5 million running bales. This is about 700,000 bales larger than in 1962 and the largest since 1963. The average 1963 yield per harvested acre was estimated at 524 pounds as of December 1, up from 457 pounds in 1962.

Disappearance during the current season is estimated at 13.8 million bales, up about 2 million from a year earlier. Both mill consumption and exports are expected to increase.

■ CALCULATING THE ODDS FOR WEATHER ■



Sometimes friend—sometimes foe. Weather has long been the uncontrollable factor in the farmer's plans. Chief among his worries is rainfall. There seems to be either too much or too little.

To counteract too little rain, the farmer long ago learned to irrigate his fields. But he never has been able to predict when the additional water will be needed or how much will have to be applied.

To make estimating the probability of drought possible, the Missouri Agricultural Experiment Station, in cooperation with ERS, recently undertook a study of drought conditions in the southeastern part of the state.

Using data on rainfall and computing a daily estimate of the moisture available in the soil, the researchers determined the drought days in June, July and August over a period of years. Drought days are 24-hour periods in which soil moisture was less than the minimum considered necessary for plant growth.

Tabulation of drought days indicated that the occurrence of dry weather of apparently damaging intensity is quite common during

periods of critical crop growth in the Missouri delta. The probability is 50 per cent that 41 or more drought days will occur during the 92 days from June 1 to August 31 in any given year. There is a 25 per cent chance that 50 or more drought days will occur and a 75 per cent chance that 32 or more drought days will be recorded. In one out of every 10 years 59 or more drought days can be expected during the three months.

An unbroken stretch of moisture-short days would, of course, harm the crops more than an equal number of dry days occurring a few at a time. In one out of two years, a drought sequence of 12 or more days is likely to happen in July, a critical month for growth of crops such as corn and cotton. Fifteen consecutive drought days in July will result in sharply reduced yields and severe losses for the farmer.

The moisture available in the soil depends on the soil type and the amount of rainfall and irrigation. When the soil is saturated it is said to be at field capacity. Any water in excess of field capacity will either run off or seep

down through the root zone.

Water is lost from the soil through evaporation and transpiration. The balance remaining is called the soil-moisture base. By subtracting the amount of water loss and adding the quantity from rainfall and irrigation, researchers can keep track of the available moisture day by day.

When the available moisture drops two or more inches below the field capacity, the farmer should irrigate the crop. There is a 50-50 chance that six applications of irrigation water would be needed during the three-month growing season in order to maintain a satisfactory soil-moisture base. Eighty per cent of the time only five applications of water would be needed; 20 per cent of the time seven or more would be required.

Using the methods developed in the study, daily soil-moisture content can be calculated and made available to farmers in relatively large areas. Also, long-term data on drought hazards can provide valuable information for engineers to use in designing irrigation systems. (1)

Plans for Crop and Land Treatment Indicate Ways to Increase Profits

Good water management may or may not be profitable for the individual farmer. It depends a lot on the watershed in question. In one such area, Spring Valley Creek, Iowa, the adoption of soil-conserving farm plans would serve water management as well as being profitable to farmers.

Farmers in the area grow row crops on steep slopes just as though they were gently rolling uplands or tillable bottoms. Soil losses in Spring Valley Creek watershed average 16 tons per acre each year. Loss per farm ranges from one to 40 tons annually.

Economists set out to find a combination of cropping practices and land treatment that would hold annual soil loss to less than five tons an acre and at the same time give the farmer the maximum net income.

Conservation control methods considered included terracing, contouring, crop rotations and construction of dams for runoff where necessary. The situation on the individual farm determined which combination was needed.

Examination of conditions in Spring Valley Creek watershed indicated that adopting terracing and contouring would actually permit an increase in the amount of row crops in rotations, even with the five-ton soil loss limit. At present, land in row crops accounts for 44 per cent of the farmland, meadow takes 43 per cent. Use of conservation practices would permit 70 per cent of the cultivated land to be in row crops with only 20 per cent remaining in meadow.

The additional row crops would result from the proper combinations of rotations and conservation practices on the various slopes. With contouring and terracing, slopes up to 14 per cent can support rotations with half

row crops. Slopes over 14 per cent usually should be pasture.

The cost of using conservation practices could be paid for partly out of farm capital and partly through existing government programs.

Whatever additional expense is incurred would be handsomely repaid. Economists estimated the adoption of soil-conserving farm plans in the watershed could add an average of \$2,200 to net income per farm. (2)

Budgets for Model Oklahoma Farms Would Call for Big Investment Rise

An income of \$2,500 net per farm isn't much when you think of the work that goes into farming. It figures out to about a dollar an hour for a 40-hour week, and far less at the actual hours most farmers put in.

But \$2,500 is an affluent world away from what many a farm family can count up when the year's returns are in.

A few figures taken from a study of the economics of farming along the eastern border of Oklahoma point up the discrepancy.

Even with above average management, net farm incomes for model 160-acre beef farms in the area ranged downward from \$934 on the best soil to \$211 on the least productive land.

To get farm incomes up to the \$2,500 level would call for a whopping increase in investment. Even on the best land, it would take 400 acres to reach the target; on the worst, some 2,000 acres would be required.

Depending on the size of the farm, the investment in land and buildings would run from \$25,000 to \$40,000. The current investment in land and buildings in the most productive region is about \$10,000.

In addition, the beef farmer would need to invest some \$18,000 in livestock and machinery, com-

pared with the current \$7,000 average for the most productive regions.

The figures are taken from a series of budgets prepared for farms in Oklahoma. (3)

Dryland Farming Plus Ranching Tends To Even Out Income Over the Years

Combining dryland farming with ranching can help the farmer use otherwise idle resources. It can also give him a greater measure of financial stability on a year-to-year basis.

But such a combination may, in the long run, cut down on the chances to increase his income.

With livestock, the cash grain farmer has a way to turn his time to profit during the otherwise idle winter season. Even in the summer there are periods when a cash grain crop requires little or no attention. The return to labor from a small livestock enterprise is apt to be extremely low, but for many a farmer it may seem better than nothing at all.

A livestock enterprise can also bolster the farmer's credit rating. The fuller employment of labor, the more reliable income with the addition of livestock and the collateral provided by the animals—all make the farmer a better credit risk in the eyes of lending agencies.

A drought year, for instance, can wipe out a crop and the farmer's income. But it is a rare year that is so dry that stock cannot supplement short grass by grazing fields too poor for harvest. Even if the range is completely unproductive, there will be some income from stock that must be sold.

The combination of cash grain and livestock enterprises can stabilize a farmer's income which is not, however, the same thing as producing the maximum income. The odds are better than even that the farmer will make more money in the long run if he can

specialize in his major enterprise.

The capable farmer may not be equally skilled at ranching. And even if he has the ability for both enterprises, he won't always have the time to attend to both when he should.

In the absence of year-round grazing, the farmer may have to borrow some of his cropland as a feed base. It is a difficult choice; the farmer may figure that his loss in crop production when cattle graze the alternate winter wheat-fallow strips is far greater than the value of the feed supplied.

It works the other way, too. The efficient cash-grain enterprise has a tendency to encroach on the feed base and even the range areas. (4)

Indiana Crop Diet Richer Despite Little Change in Fertilizer Tonnage

Indiana farmers have been supplying their crops with an increasingly rich diet. The result has been a continuous rise in the total of available plant nutrients applied to crops in Indiana since the end of World War II.

The increase in applications of fertilizer is due to several things. Farmers have learned more about how crops respond to fertilizer. The price of crops relative to the price of plant food has been fairly favorable. And manufacturers have been producing fertilizers containing more available nutrients.

Thanks to the higher analysis fertilizers, the increase in use of nutrients since 1954 has been possible with little change in the total tonnage applied.

The most remarkable shift in use of plant nutrients in Indiana is the increase in application of nitrogen. During 1945-54, use of nitrogen climbed to seven times the wartime level. Since 1954, the total tonnage of nitrogen applied to crops has more than doubled. The latter increase was largely in

the use of liquid nitrogen fertilizer such as anhydrous ammonia.

While not as spectacular as the change in use of nitrogen, the amount of potash applied to plants by farmers in Indiana has more than tripled since 1945 and the quantity of phosphate used nearly doubled.

Along with the changes in available nutrients, the acreages of most field crops, particularly corn, went up. This reduced the rate of application per acre slightly. Another factor was the increase in the proportion of the total acreage fertilized.

More than half of the plant nutrients used in Indiana since World War II were applied to corn. This crop received the bulk of the nitrogen, too. Seventy-three per cent of the total nitrogen used was placed on corn in 1959, compared with 65 per cent in 1954.

Wheat was the second largest recipient of fertilizer in Indiana with oats and soybeans next.

Despite the past records, indications are that many Indiana farmers could use fertilizer to an even greater extent.

Recommended levels for fertilizer applications by Purdue University reveal that to maintain a reasonable supply of plant food in the soil farmers in Indiana would have to apply a total of 50,000 tons of nitrogen, 69,000 tons of phosphate and 23,000 tons of potassium in addition to current use of fertilizer. (5)

Batch-in-Bin Drying Can Help Farmer Keep Up With Pace of the Harvest

Batch-in-bin drying for grain is gaining favor over the layer system because it is faster and easier to adjust to harvesting.

Some 1,000 bushels of 25 per cent moisture corn, for example, can be batch-dried in a day in a 21-foot diameter bin. Comparable capacity for layer drying would be 175 bushels per day. The harvesting or filling rate for layer-drying is only 245 bushels a day, compared with the 1,000 bushels for batch-drying.

Furthermore, the farmer can get a wide range of drying capacities with the batch-in-bin system, with a combination of different drying units for bin sizes up to 36 feet in diameter. And with possible temperatures up to 140 degrees, greater capacities can be obtained.

The amount of grain in the bin is relatively unimportant in the batch system which can handle a layer of a few inches to several feet, so long as it is level.

Operating costs for the batch-in-bin system are slightly higher than the layer method because of the cost of moving the grain to storage bins. The cost for the batch system averages about 3 cents a bushel; for the layer system it is about 2½ cents. However, the investment in bins and equipment is usually less for batch-drying. (6)

Here's How to find the number of bushels of shelled corn or grain in a bin:

For a rectangular bin use: $0.8 \times \text{length} \times \text{width} \times \text{average depth in feet} = \text{bushels}$
 Suppose your crib is 18 feet long and 12 feet wide. It's filled with shelled corn to an average depth of 8 feet. The problem is worked like this: $0.8 \times 18 \times 12 \times 8 = 1,382$ bushels

For a round bin use: $0.6283 \times \text{diameter} \times \text{diameter} \times \text{average depth in feet} = \text{bushels}$
 If your crib is 12 feet 5 inches in diameter and filled to a leveled depth of 6 feet 4 inches, the problem is worked as follows (12 feet 5 inches is 12.4 feet and 6 feet 4 inches is 6.3 feet): $0.6283 \times 12.4 \times 12.4 \times 6.3 = 609$ bushels (7)

Piedmont's Cotton May Give Way To Peaches, Poultry, Pine, Profit

Loblolly pines in the old cotton fields—a sign of neglect or good management?

Most likely the latter, at least in South Carolina's Piedmont. Cotton has a lot of competition these days from enterprises promising a better income, especially for the 87 per cent of Piedmont farms with less than 150 acres of cropland.

Beef yearlings, dairy cows, poultry, peaches and pines—all are good alternatives to cotton, depending on the size of the farm, the capital available and the management ability of the man in charge.

The agricultural picture is changing rapidly in the upcountry, with 41 per cent fewer farms in 1959 than in 1954. The number of people employed in agriculture dropped from 53,000 to 34,600 during the same five years.

Researchers from the South Carolina Experiment Station and ERS have worked out farm organizations designed to bring the best possible returns to the farmers still in business. All the suggested enterprise combinations

depend upon the price of cotton.

Small-scale farms (10-49 acres of cropland): It's doubtful that cotton could be grown economically at prices below 40 cents a pound, and the price has been this high only once in 40 years. A poultry enterprise is about the most profitable full-time possibility, but it requires a capital investment few small operators are willing to risk. The number of farms of this size is expected to continue to drop, with most of those remaining becoming residential or part-time. The best part-time alternative combines a beef-yearling grazing system with planting of loblolly pines (no cash income from pines for the first 15-20 years).

Small commercial farms (50-149 acres of cropland): Cotton, even with prices as high as 36 cents, would not be as profitable as beef yearlings grazed on Coastal Bermuda, or other alternatives. For a few farms, competition allowing, dairy cattle, poultry or peaches would bring top returns. But for most, pines and beef yearlings would be the best combination—part-time: 67 acres of pine, 12 acres of fertilized Coastal Bermuda grass for grazing and 20

beef yearlings on a representative farm with 82 acres of cropland; full-time: more Coastal Bermuda grass instead of pine and 114 beef yearlings.

Medium sized commercial farms (150-249 acres of cropland): Cotton can bring good returns on a farm of this size, but on limited acreage as a supplement to the major enterprise. Grade A milk and peaches might bring the highest returns, but considering the market outlets the beef-yearling system is the best possibility on most farms. At 27.9 cents per pound cotton would be added to the farming system, with the acreage held at 14 acres until the price of cotton reached an unlikely 43.3 cents. On a dairy farm, cotton at a low of 27.7 cents would allow 30 acres in the optimum organization; the acreage wouldn't go up again unless the price reached 38 cents. For a peach-beef combination the figures would be 28.9 cents per pound of lint and 11 acres until the price went above 41 cents.

Large commercial farms (250 and more acres of cropland): Cotton is currently profitable but it would not be included in the most profitable system if the price should drop below 25.9 cents. Below this price the optimum organization includes 208 acres of Coastal Bermuda grass used by 342 beef yearlings. Planted pine would cover 170 acres of once open land. The estimated net returns to the operator's labor would be \$6,100. At 25.9 cents for cotton, the number of beef yearlings would drop to 221 and cotton acreage would be 81 acres for an increased return per year of only \$20. But for each tenth of a cent increase in the price of cotton over 26 cents, net returns to the operator's labor would increase \$40 to \$60, depending on the size of his operation. Conservation of soil resources in this area limits row crops to one year out of three. (8)

CAROLINA COTTON FARMS CAN'T STAY SMALL AND KEEP UP

The problem? To plan resource combinations that will bring farm operator incomes up to a minimum of \$2,500 in South Carolina's Upper Coastal Plain, where an estimated four-fifths of the cotton farmers made less than \$1,500 for their labor and management in 1959.

Economists from the South Carolina Experiment Station and ERS have worked out cotton farm budgets for four different levels of operator earnings: \$2,500; \$3,500; \$4,500; and \$5,500.

The least cost enterprise combinations at all four levels included cotton, soybeans, pines.

Commercial cotton farms in this region in 1959 averaged 97 acres. Almost half again as much land would be needed for an income of \$2,500; 148 per cent more for \$5,500. For all the farmers to make at least \$2,500 the number of cotton farms would probably be reduced by half as the smaller farms were combined into larger units.

And a farmer may find that his own labor and management will be worth more to his family if he limits his farming activities to supervising hired and family labor while he holds an off-farm job. (9)

Farm Mortgages in Second Quarter Are Up One-fourth From Year Ago

In the second quarter of 1963 farm mortgage loans closed by the three reporting lender groups totaled \$416 million, 25 per cent higher than in the second quarter of 1962. The figure includes increases in existing loans. The increase was somewhat sharper than the 19 per cent rise in the dollar volume of new lending between the first quarter 1962 and 1963.

The expansion in lending reflects increases in the number of loans made as well as gains in average loan size.

Despite the continued rise in farm mortgage lending, repayments in the second quarter of 1963 were made at about the same rate in relation to outstanding loans as a year earlier.

Here is a run-down of April-June 1963 by reporting lender group:

Life insurance companies. New and additional loans closed totaled \$187 million, 35 per cent higher

than in the second quarter of 1962.

Federal land banks. The federal land banks loaned \$385 million during the first half of 1963, 11 per cent over the volume of January-June 1962.

Farmers home administration. About \$41 million rural housing and direct farm ownership loans were made in second quarter 1963. This was 31 per cent higher than the volume loaned during the same period a year earlier, but far below the peak of \$80 million in October-December 1962. (10)

FARM INCOME STATISTICS:

Some of the most quoted—and misquoted—of all statistics are the U.S. Department of Agriculture's national farm income figures. USDA publishes regularly a comprehensive set of income estimates relating to agriculture. The major series, along with other important series from which they are derived, have been developed over more than a third of a century. Each series, whether major or minor, is designed for a specific purpose. For accurate results it should be used only in the way it was designed to be used. Unselective use is a common cause of error. Many figures may be vaguely reported as farm income—cash receipts, realized gross income, total net income, for example. Yet there are billions of dollars worth of difference between them. USDA's estimates center around two major concepts of farm income: One views agriculture as a business or an industry and measures income from the job of farming. The other views the people who live on farms and measures their income from both farm and nonfarm sources. The major series in each classification and their relationship to other series are shown here (11)

INCOME FROM FARMING, 1962

Billion dollars

CASH RECEIPTS FROM FARM MARKETINGS	Money received from sales of about 150 farm products. This series is an indicator of general market conditions for farm products	35.9
GOVERNMENT PAYMENTS TO FARMERS	Payments to farmers under farm programs. Net price support loans are included with cash receipts above.	1.7
NONMONEY INCOME	Includes home consumption of farm products and imputed rental value of farm dwellings.	3.2
REALIZED GROSS INCOME FROM FARMING	Income from farming available for all purposes—farm operation, family living and investment.	40.8
PRODUCTION EXPENSES	All cash spent to operate the farm business, plus certain non-cash items. Includes depreciation of equipment and other capital items rather than current purchases of these items.	28.2
REALIZED NET INCOME	USDA's standard net income figure. The word "realized" indicates that the figure has not been adjusted for changes in inventories. Represents return to operator for his labor and management, the labor of his family and his invested capital.	12.6
NET CHANGE IN INVENTORIES	Difference this year from last in quantities of each crop and livestock product held on farms, valued at average prices received by farmers during the year just ended.	0.7
TOTAL NET INCOME	This figure is a component of national income figures of the Department of Commerce. It is published in the national income reports of that Department as "net income of farm proprietors."	13.3

PERSONAL INCOME OF FARM POPULATION, 1962

Billion dollars

PERSONAL INCOME FROM FARM SOURCES:		
TOTAL NET INCOME FROM FARMING OF FARM RESIDENT OPERATORS	This is the total net income of farm operators from farming minus the net income received by farm operators who do not live on farms.	11.9
FARM WAGES OF LABORERS LIVING ON FARMS	Wages and other labor income for farmwork paid by farm operators out of their gross income to workers living on farms. These wages are a production expense to farm operators, but a source of income to farm population.	1.7
CONTRIBUTIONS OF FARM RESIDENT OPERATORS AND WORKERS TO SOCIAL INSURANCE		0.2
TOTAL PERSONAL INCOME OF FARM POPULATION FROM FARMING		13.4
PERSONAL INCOME FROM NONFARM SOURCES:	Includes wages, salaries, and other labor income of farm residents from nonfarm jobs, rents and royalties, dividends and interest, net income from nonfarm business and professions, and transfer payments, such as unemployment compensation and social security.	7.1
TOTAL PERSONAL INCOME OF FARM POPULATION FROM ALL SOURCES		20.5

Conditions of a Tenure Arrangement Related to Efficiency of Operation

Tenant or owner? When it comes to making the best use of resources on the farm, there are few differences among owners, crop-share tenants or livestock-share tenants.

The conditions and terms of the individual tenure arrangement are more important to farm efficiency than the differences between the broad tenure groups.

In broad outline, that is the conclusion of a long-term research project conducted under the joint supervision of the experiment stations of Iowa, Kansas, Missouri and Nebraska and the Economic Research Service.

The study pointed out that the tenure groups differed in regard to size of business, combinations of inputs and outputs, age of the operator and investment in improvements. But the efficiency with which these resources were used by the three tenure groups was about the same.

Not surprisingly, the owner-operators in the study had a higher net worth on the average than

tenants did, if for no other reason than the owners were older as a group and had had more time to accumulate capital.

However, the findings suggest that renting provides a better income opportunity than does ownership. By and large the young farmer gets more out of his limited resources when he invests in machinery and operating capital than he does when he spreads them over all the inputs required

in a small owner-operated unit.

The study also pointed to a flaw that exists in most current leases. Few tenant-landlord arrangements offer much encouragement to invest in improved buildings on the farm. It is the rare lease that provides for cash rental on the farm house separate from production inputs. And such contracts seldom provide for a return on the investment in service buildings. (12)

REAL ESTATE TAX BILL COSTS FARMERS MORE THAN EVER

Taxes on farm real estate in 1962 increased by almost \$72 million or more than 5 per cent above those levied in 1961. Three states, California, Illinois and Iowa, accounted for more than one-fourth of the \$1,398 million farm real estate taxes in 1962.

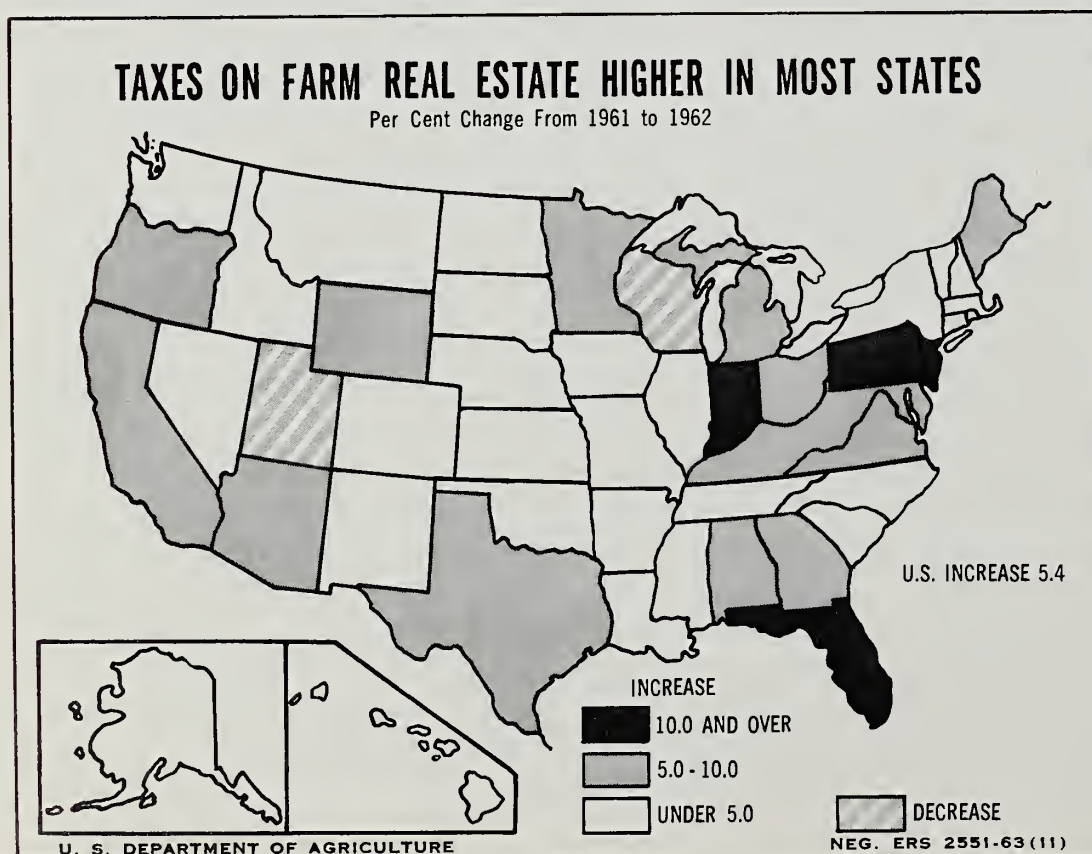
As in recent years, taxes per acre of farm real estate averaged highest in New Jersey, at \$11.19, and lowest in New Mexico, at 16 cents. In 17 states the average tax per acre was more than \$2, and in 21 states it was less than \$1.

Variations among states in average tax per acre reflect differences in the value of farmland, in the relative value of improvements and in the role of the property tax in state-local fiscal systems. Agriculture is characterized by small, intensive farm operations in the four states where taxes per acre average highest. In the mountain region where taxes per acre are relatively low, much of the land is low-value grazing or dry farming acreage.

Taxes per acre of farm real estate increased in 47 of the 50 states from 1961 to 1962. Wisconsin and Utah indicated small decreases and Alaska showed no change. In Wisconsin, the decline is probably the result of a property tax credit.

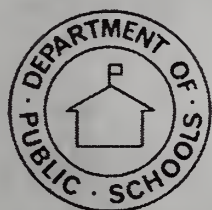
The greatest tax increase, 21 per cent in Indiana, was largely due to a state-wide reassessment. Three other states showed increases of more than 10 per cent. In 15 states the increase was from 5 to 10 per cent and in 28 states it was less than 5 per cent.

The index of farm real estate taxes per acre advanced from 123 per cent of the 1957-59 average in 1961 to 129 per cent in 1962. Taxes on farm real estate absorbed 8.9 per cent of total net farm income in 1962, compared to 8.7 per cent a year earlier. These taxes as a per cent of farm income have more than doubled since 1951. (13)



No Diploma

*In the
country or in the city, a high school dropout
faces the same prospects--unemployment, a low
paying job, a lifetime of meager income for today's
unskilled worker*



No Future



In most states a boy can quit school when he reaches 16, and many do. They are anxious to start earning some money. But getting a job is a serious problem for dropouts; getting a good job without a high school diploma is practically impossible.

Although the number of 14- to 24-year-olds who had been dropouts declined from 7.8 million in 1950 to 6.1 million in 1960, the problem is still serious. For example, in 1960, 27 per cent of all persons dropped out of high school before completing the 12th grade. An additional 3 per cent were retarded two or more grades and may quit before graduation.

A number of studies demonstrate that the more education a person has the more money he earns in a lifetime. And unemployment rates for dropouts are far

higher than for graduates.

A higher proportion of farm than city boys fail to complete high school.

Since only a small proportion of rural boys can expect to become farmers, most of them will be looking for jobs in the city. With little to qualify them for work, the dropouts are likely to be performing the most menial tasks for minimum wages.

In 1960, about 385,000 persons 14-24 years old in the United States had less than five years of school. They are, for most practical purposes, illiterate. The growth of the school age population lends itself to some ominous projections. By 1970, for example, there will be about 56.4 million persons 14 to 24 years old in the United States. If the dropout rate for that age group remains at the

1960 level, about 12.9 million of these young persons will fail to complete high school.

Providing a high school education for the dropouts 14 to 19 years old who have already completed at least one year of high school would be expensive. In 1960, there were about 1.5 million youths in this category. It costs about \$472 a year per pupil to attend high school. At this rate it would cost some \$1.4 billion to provide these students with additional education.

This is a lot of money but the additional cost would be more than justified by the benefits of education to the individual and society in the form of higher incomes, increased knowledge and skill of the labor force and reduction in rates of unemployment and welfare expenses. (14)

ERS Study of Idle Tracts in New Castle County, Delaware Presents Some Problems Faced by Typical Expanding Suburb

A high-rise apartment. A vacant lot. A shopping center. A weed-grown field. A space-age research laboratory. An unused tract. More apartments. More empty land. A cluster of split-level homes.

This is suburbia in much of the country. And it has its faults. The sewage line that serves the last house on the road may have to run out 15 miles or more. So do the areas of police and fire protection. And the school bus system.

These public services, provided for residents at community expense, are serving a lot of vacant land, and it's an expensive business.

Why aren't these tracts being used? A new study by the Economic Research Service, in cooperation with the University of Delaware, provides many of the answers.

The study is one of many being conducted by ERS and cooperating groups on the problems confronting farmers on the urban-rural fringe. Farmers are finding it increasingly hard to maintain efficient farm operations when the encroaching city brings with it higher costs for almost everything—not the least being higher real estate taxes.

Researchers took New Castle County, surrounding Wilmington, Delaware, as a good example of

a suburban area growing at an unprecedented rate. In the last 20 years some 37,000 acres of rural land in the county have been converted to urban uses. But the checkerboard pattern of used and unused land is pronounced.

Much of the unused land is government-owned. But in 1960, ERS researchers found 163 privately owned tracts, 10 acres or larger, lying idle. Seventy per cent of these tracts were owned by individuals, the rest by commercial firms, churches, civic groups and the like.

By and large, the individually owned tracts were held by older people living in New Castle County. Only 2 per cent of the owners were under 40 years old; only 20 per cent lived elsewhere in Delaware or in other states.

Of the 52 owners who answered a mail questionnaire, more than a third said their land was idle in 1960 because it was up for sale or under option. Why, then, doesn't the land sell?

The big reason is poor development potential. Of the 163 tracts surveyed, 107 fell into this category. In most cases the soil wasn't suitable for big apartments, shopping centers or housing developments. Some tracts were too far from developed areas, public utilities and transportation. Or they lacked the right zoning permission.

Agriculture wasn't the answer either. Only 7 per cent of the tracts could be considered highly productive farmland.

The ERS study suggests several ways to break the impasse. One is for public agencies to buy up some tracts for open space use—parks, outdoor recreation or wildlife management. A few tracts, often the only open space left between housing subdivisions, might be ideal as playgrounds, small parks or picnic areas.

Where the terrain would require considerable grading or fill-

VERY LOW INCOMES PLAGUE MANY FAMILIES IN KENTUCKY

Americans earn more money per capita than any other persons in the world. The nation's 44 million families had incomes averaging \$5,400 in 1959. Nevertheless, more than one family in 10 lived on less than \$2,000 a year.

If these low income families were divided equally throughout the country, the problem would not be so serious.

But the low income families are heavily concentrated geographically—mainly in the Southern states, the Ozarks and sections of Michigan, Wisconsin and Minnesota. To compound the problem, most of the low income families in these areas work in one industry—agriculture.

In the Appalachian area where incomes are also low, agriculture and mining are the important sources of employment.

A typical low income area is south central Kentucky. In a study of five counties there, researchers interviewed 600 households. They found that agriculture, although the largest indus-

try, brought in very little cash income. Nearly one-third of the families had incomes of \$1,000 or less.

Families in the five counties not only earn little money but also lack many of the conveniences most of us take for granted. To many of the families in the Kentucky area, for example, soaking in a hot tub of water is a real luxury. Only 19 per cent of the families had hot running water; 15 per cent had bathrooms.

Another factor that hampers the economic strength of the area is the low level of education of both children and parents. Only 8 per cent of the heads of households had completed high school. And when parents have limited education, chances are their children will not complete high school either. About 75 per cent of the males who left the area during the past decade did not have high school diplomas. Their chances of getting good jobs in the city, without a diploma, were remote indeed. (15)

ing, land developers could reduce costs considerably if they used the cluster plan layout rather than the conventional home layout for a new subdivision. The cluster plan groups houses in compact units separated by open space.

Easing zoning restrictions would be the answer for some tracts.

Site taxation—an application of the single tax concept—is another. Already being tried in Australia and Canada, site taxation imposes a tax on the land but not on the buildings, a provision that should encourage some owners to develop their tracts.

By the same token, realistic increases in tax assessments would induce owners of idle tracts to sell or develop the land more quickly. (16)

SURVEY EXAMINES RETIREMENT PLANS OF DAKOTA FARMERS

After forty years or so on the job most men are ready to call it quits. Farmers are no different.

Two developments have given more farmers more reasons to make plans for retirement. In 1956, the Old Age and Survivors Act, better known as Social Security, was extended to cover farmers. More farmers will now be able to afford retirement.

The second reason is the changing age pattern of the farm population. As the young adults head for city jobs, the population back on the farm is, increasingly, the very young and the very old. In 1959, some 17 per cent of all farmers in the U.S. were 65 or older. An additional 22 per cent were 55-64 years of age.

While the move into retirement may be a jolt to anyone, farmers face more changes in their way of life than most other groups. There is, in fact, a hard core of farmers who don't like the idea at all. According to a recent survey made in South Dakota, about 15 per cent of the farmers in the

Government Aid and Private Industry Can Enliven Economy in Small Towns

Rural communities may be small but they offer plenty of opportunity for investment.

Admittedly, many barriers block growth in small communities. Yet, small towns have an ace in the hole—people. In most rural communities, workers are the most abundant and under-used resource.

Local areas can make the most of their human resources through four federal programs: The National Vocational Act authorizes vocational schools in certain rural areas. The Area Redevelopment Act provides 16 weeks of training to prepare rural residents to work in new industries. The Manpower Development and Training Act allows a year's training plus family

allowance for needy persons who want to get better jobs. And finally, the Accelerated Public Works Act provides money to low income areas.

By offering industry tax advantages, free land, paved factory sites and utility connections, small communities can attract outside investment. (17)

Enough rain, snow and sleet fall on the 48 contiguous states each year to cover the entire country with about two and a half feet of water. But it may not be enough for the next generation of farmers.

Seventy per cent of this precipitation is absorbed by crops, grass and trees, or is lost through evaporation. The remaining 30 per cent reaches streams as the concentrated water supply.

USDA & Other Agencies Take Steps To Insure Our Fresh Water Supply

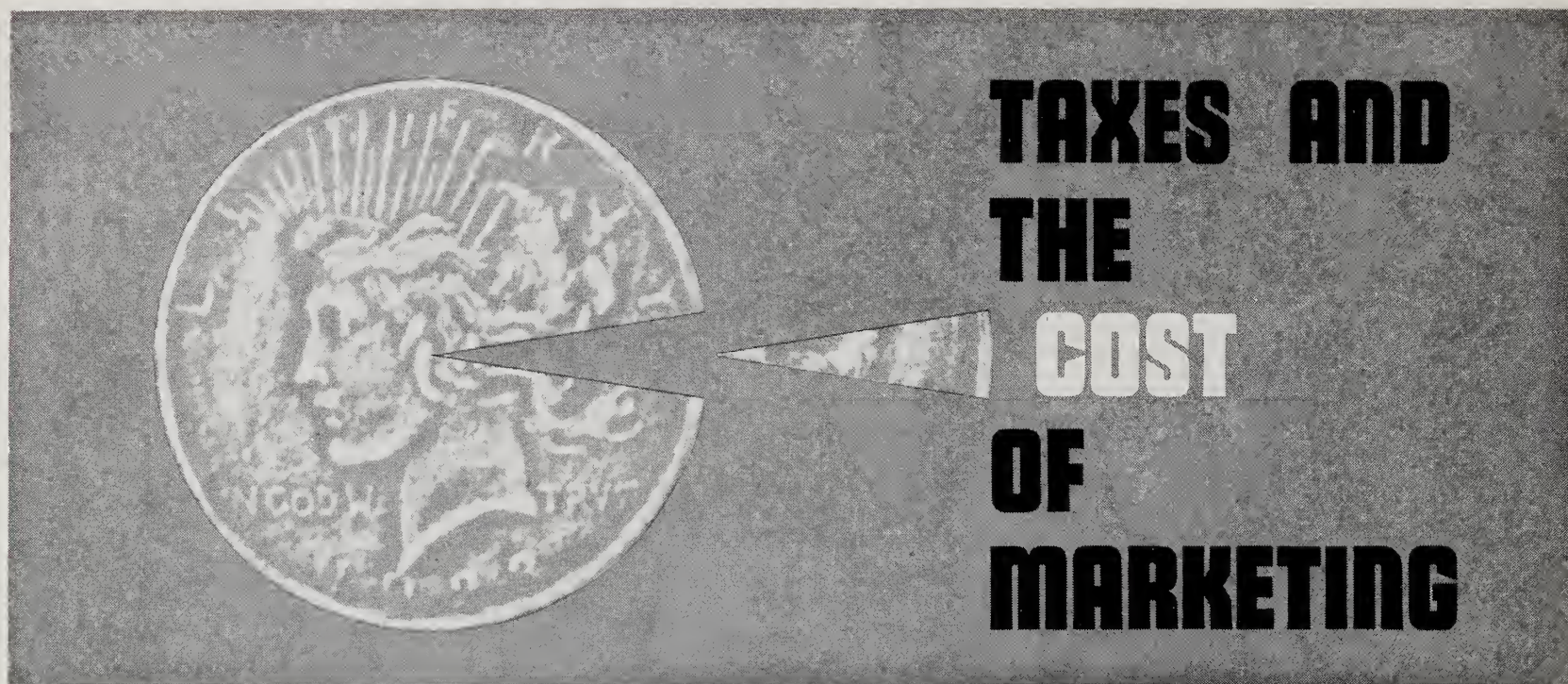
USDA economists expect the demand on the nation's water supply to triple during the next 40 years. Many areas of the country already face serious shortages of water.

The Departments of Agriculture, Army, Interior and Health, Education, and Welfare have prepared policies and standards for the use and development of our water and land resources.

The program includes comprehensive analysis of flood prevention, erosion and sediment control, farm and nonfarm water management, fish and wildlife and recreation.

The new standards range from local watersheds to large river basins. By May 1963, 463 local organizations had received approval to begin watershed improvements.

Although these projects affect less than 3 per cent of the total area needing attention, the program is already a significant part of river basin development. (19)



Food marketing firms paid about \$2 billion in taxes in 1960. The taxes amounted to 5 per cent of the \$40.3 billion marketing bill for the year.

Roughly half the total tax bill was federal income tax. Business taxes such as real estate and personal property taxes, social security and payroll taxes and license fees made up the rest of the tax bill.

While the total cost of marketing rose 79 per cent from the 1947-49 average, taxes on the food firms climbed 100 per cent.

Processors paid 63 per cent of the taxes levied on food firms, wholesalers 9 per cent and retailers 28 per cent.

The absolute level of taxes per dollar of sales followed the same general pattern, with processors in the top bracket and wholesalers in the bottom one. These differences in levels of income tax payments followed the amount, type and unit value of marketing services provided by firms operating at the different stages of marketing. Differences in the level of business taxes were largely the result of the amount of taxable property required per unit of sales and the amount of labor per unit incurring social security pay-

ments.

But despite the difference in shares and levels of taxes paid, the three food groups appear to be subject to the same economic forces. Index numbers of taxes per dollar of sales and combined income and business taxes followed a remarkably similar pattern of movement for all three groups between 1947 and 1960.

For the three sectors of the food industry the tax story looked like this:

Food processing. The processors paid an estimated \$1.3 billion in taxes in 1960, compared with the average of \$0.6 billion for 1947-49. Income taxes in 1960 amounted to \$738.8 million, up 81 per cent from the late '40s. Business taxes ran to \$526.1 million, a 119 per cent increase.

Between 1947 and 1958, the large corporate food processors found themselves paying bigger income taxes per unit of sales, while the small and medium size processors paid less.

Food wholesalers. Taxes for the wholesalers amounted to \$190.4 million in 1960, or 56 per cent more than the 1947-49 average of \$121.8 million. Some \$89.1 million was for income tax; business taxes amounted to \$101.3 million.

Compared with the average for 1947-49, the 1960 figures show a rise of 28 per cent in income taxes and 95 per cent for business taxes.

Wholesale corporations reported income tax payments of about 0.5 cent per dollar of sales in 1959, compared with 0.6 cent for the 1947-49 average. For the entire 12-year period, income tax per dollar of sales for the large firms averaged close to three times the size of the tax paid by the small companies.

Food retailing. The tax bill for retailers was \$562.4 million in 1960, or 140 per cent above the 1947-49 average of \$234.5 million. Income taxes in 1960 for the retailers amounted to \$235 million, up 136 per cent from the late '40s. Business taxes were \$326.7 million, a 143 per cent increase.

The retail corporations paid 0.92 cent of income tax per dollar of sales in 1959, compared with 0.89 cent in the 1947-49 period.

The index numbers of income tax per unit of sales show the relative tax position of big, little and medium size firms getting farther and farther apart. Between 1948 and 1959, for example, the difference between the medium and large firms increased from one index point to 67. (20)

MORE MARKET SERVICES TO REFLECT CHANGING U.S. LIFE

Agricultural marketing is one of our fastest growing industries, having taken over many of the functions that used to be handled by farmers at one end of the marketing system and by housewives at the other. And it's bound to get bigger.

As USDA economists see it, here are some of the developments to expect in agricultural marketing over the next quarter century:

—The exodus of people from farm to city will taper off, gradually drying up this source of increased demand for marketing services. Up to now populations moving away from rural areas have automatically increased marketing services—and costs. For example, foods have to be hauled longer distances from farms to city markets, preserved more carefully en route and distributed more widely throughout metro-

politan areas. But urban populations themselves will continue to grow and this, plus higher personal income, will step up big city demand for marketing services.

—Farmers too will buy more processed foods, using fewer commodities directly from their own fields and gardens. Back in 1940 some 60 per cent of all food eaten by farm families was home grown; by 1955 the figure had dropped to 40 per cent and the decline continues. But there will be fewer families on farms to use marketing services. And, judging from the rising age of farm operators, there will be fewer children and less food will be eaten per farm family.

—Coordination of farm and marketing functions will further increase. We see the trend today in the broiler industry and to a lesser extent in livestock feeding, turkey and egg production.

—Whole systems of marketing rather than individual firms will compete for business. We can see this trend developing already in the stepped up competition in rail versus truck transportation, chain stores versus meat packers, national food brands versus private brands and so on.

—Processing plants will move closer to farms and specialized sources of supply. Already many slaughter houses have pulled out of Chicago and New York City and poultry dressing plants have located in concentrated producing areas.

—Retail stores will do less and less packaging as this function moves back in the marketing system to processing plants and, in the case of fresh fruits and vegetables, even to orchards and farms.

—With better transportation and inventory control, more food stocks will be stored closer to production points rather than at many distribution centers around the country.

—The quarter century will see a larger share of the consumer's food dollar going for market services. Counting all food consumers buy, in grocery stores, restaurants and the like, about two dollars now go for market services for every dollar returned to the farmer. (21)

Cotton Gins Could Cut Power Costs By Relocating Machinery, Peaking Load

A lot of difference between cotton gins shows up in cost comparisons. And inefficiency accounts for too much of the difference.

In a study of 90 all-electric gins in Arkansas and Missouri, ERS researchers found a range of power costs from more than \$3 a bale down to less than \$1.

Fuel costs varied about as dramatically, according to figures from 49 gins. Natural gas used in lint driers cost some gins 10 cents a bale; others spent as much as

TAXES DOUBLE FOR FOOD MARKETING FIRMS¹

Year	Type of tax			Distribution of tax	
	Federal income	Business taxes ²	Total	Federal income	Business taxes
	Million dollars			Per cent	
Average 1947-49	579.1	426.8	1,005.9	58	42
1947	649.3	399.2	1,048.5	62	38
1948	547.4	417.2	964.6	57	43
1949	540.7	463.9	1,004.6	54	46
1950	721.3	519.3	1,240.6	58	42
1951	732.9	547.4	1,280.3	57	43
1952	766.2	568.9	1,335.1	57	43
1953	826.5	586.2	1,412.7	59	41
1954	801.9	633.5	1,435.4	56	44
1955	922.3	681.8	1,604.1	57	43
1956	942.1	706.1	1,648.2	57	43
1957	935.0	749.9	1,684.9	55	45
1958	997.1	819.6	1,816.7	55	45
1959	1,026.9	921.1	1,948.0	53	47
1960 ³	1,063.6	954.1	2,017.7	53	47

¹ Corporate and noncorporate food processors, wholesalers and retailers. Data are adjusted to the domestic farm food marketing bill. ² Property taxes, social security, unemployment insurance, state income tax, franchise taxes and license fees. ³ Preliminary.

43 cents. Propane/butane costs ranged from 22 cents a bale to \$1.01.

The dirtier and damper the seed cotton, the more money spent per bale on electricity to run fans and on fuel to heat the air in driers.

But what about gins of similar size and equipment that have very different power and fuel costs for the same results?

Some gins were found to operate at little more than two-thirds efficiency; a few rated even lower. Some are feeding electricity to fans they could eliminate entirely by improving plant design or gin piping layout.

Fans use a high proportion of a gin's connected horsepower. And since they use more power to move empty air than cotton or trash, it's generally an economy to close a gin stand down if it is without cotton for 10 minutes or more. Installation of automatic throttling valves on fans that

move cotton intermittently would also save power. So would careful matching of fan size to the job.

Volume of cotton reaching the stands is one of the biggest factors in gin stand efficiency. It's essential that plant design provide for enough cotton at all times for each stand in operation. Often small changes in plant organization can keep saws at all stands ginning at or near capacity, for more ginned lint per kilowatt hour and thus lower power costs per bale.

Some ginners keep drier temperatures high enough to take care of even the soggiest seed cotton. They waste fuel thereby when the run-of-the-mill loads go through. It would be cheaper to invest in devices to measure the moisture content of seed cotton or ginned lint. Accurate regulation of drying temperatures would not only cut fuel costs, but also prevent quality loss from overdrying. (22)

SMALL LOCAL MEATPACKER MAY BE DOWN BUT NOT OUT

The small local meatpacker in the Southern Plains is having a hard time meeting the volume and quality requirements of the supermarkets.

A study of the Texas-Oklahoma meat industry was made recently by agricultural economists of ERS, Oklahoma State University and Texas A&M University.

The total number of grocery stores dropped sharply in Texas and Oklahoma between 1948 and 1958, as it did elsewhere in the country. According to the study, however, sales by supermarkets in the Southern Plains increased from 50 per cent to 65 per cent of total grocery store sales.

Supermarkets demand assured supplies of larger quantities of uniformly high quality, federally inspected meat. The typical small local packer of the Southern Plains has been unable to meet all these requirements.

The rapid growth of the commercial livestock feeding industry in the Southern Plains may also have considerable impact on small local meatpackers. Since 1950, the number of Southern Plains cattle feedlots with 1,000 or more head capacity has more than doubled. So the small local packers are finding it difficult to keep pace on the buying side too. They do not have the facilities or the product markets they would need to compete strongly for the volumes of cattle now coming from the larger commercial feedlots.

The small meatpacker is not without some advantage, however. For one thing, he may be close to local producers and consumers. This means lower assembly and delivery costs. Moreover, it is easier for him to prepare the meat according to standards of local retailers. He lacks the sometimes rigid standardiza-

tion of products and services offered by the larger specialized packers. He is aware of local tastes. He may have lower wage costs because workers are non-union. And he is free of some restrictions on interstate shipping.

An impressive list, but is it enough? Regional and national packers are increasingly taking advantage of falling transportation rates for dressed meats. The differences in wage costs, too, are diminishing as unions become more widespread.

The regional packer has some advantages over both the small local and the large national companies. In addition to meeting federal inspection standards (which the small local packer often doesn't) the regional packer can cut some of his costs compared with the small packer because of his larger volume. By specializing in fewer kinds and cuts of meat the regional firm can also compete favorably with the largest national packers.

So while small local slaughterers are being challenged, the largest packers are also pressed. Nationally the share of total meat sales by the nine largest packers dropped from 62 per cent in 1950 to 53 per cent in 1959.

The small local packer is left in a position similar to the one he has always occupied, buying scattered lots of cattle in small numbers mostly from smaller producers and selling to the smaller stores. (23)

• • • • •
 • **Meat Makes Leather** •
 • When it comes to hide pro- •
 • duction, supply and demand are •
 • not even kissing cousins. •
 • It's not the leather we demand •
 • that determines the supply and •
 • types of hides available. It's •
 • the meat we eat. •
 • Present trends in beefeating •
 • and shoemaking, continued to •
 • 1970, indicate that there will be •
 • 5 to 6 million more hides to •
 • market by then. (24) •
 • • • • •



INDEX OF FARM OUTPUT PER PERSON

Area	Average 1935-39	1961/62	Preliminary 1962/63	Estimates 1963/64
Canada	94	79	97	104
United States	85	100	100	100
Latin America	103	105	102	100
Western Europe	92	111	115	115
Eastern Europe	109	121	121	115
Far East, excluding Com. Asia	111	112	110	109
West Asia	93	102	103	104
Africa	107	100	106	105
Australia-N. Zealand	103	107	110	110
World, with estimates for Com. Asia	102	104	106	104

AGRICULTURE '64 WORLD REPORT

Unlike the last two years, when world output of farm products moved a step ahead, population growth is out in front this year.

World agricultural production is expected to climb 1 per cent in 1963-64. But population will increase 2 per cent. This means there'll be 1 per cent less food per person this year than in 1962-63.

The big story of the year was the failure of agriculture in the East European bloc. The Soviet Union's very poor grain crop in 1963, coupled with another so-so year for harvests in other bloc countries, resulted in greatly increased imports of grain, mostly wheat and mostly from Canada and Australia. Proposed purchases of U.S. wheat are still pending.

The table above, taken from ERS's report on the world agricultural situation for 1964, shows the per capita trend at a glance. Indexes are based on the value of production at constant prices.

ERS economists use a split year in describing output because most Northern Hemisphere harvests come in the summer and fall but crops in the Southern Hemisphere aren't all in until late spring of

the following year.

Every region except the East European bloc was able to step up total agricultural output this season compared with 1962-63. But only Canada and West Asia managed to stay ahead of population growth and raise per capita output.

Under management programs U.S. production is up less than 2 per cent. Our population rose about 1.5 per cent during the year, so the per capita increase in farm output figures out at less than one-half of 1 per cent.

Again this year Latin America will see a slight drop in output per capita despite overall production increases. Production just can't get ahead of the world's fastest growing population.

Western Europe will end the year with about the same record-high production levels it attained in 1962-63. With population growing less than 1 per cent a year, the region isn't exposed to the pressures that confront Latin America and other developing areas.

West Asia's success in raising total output 4 per cent above 1962 is due largely to the bumper wheat crop in Turkey. Iran, the

region's other large agricultural producer, has also had a good year with higher yields of wheat, rice, cotton and most livestock products. West Asia's population growth held the per capita increase to about 1 per cent, but unlike most regions it did manage to stay ahead.

Output in North Africa should run nearly 2 per cent above the record levels of 1962-63. Africa south of the Sahara should also up production by about 2 per cent, but this won't match the 4 per cent increase registered in 1962-63. However, the continent as a whole has had a population increase which, along with a rising demand for food this year, will mean a little less food available per person.

Agriculture in the Far East virtually stood still this year, increasing less than one-half of 1 per cent. Farm output per person was down about 1 per cent. What economic progress there was came mostly in the industrial sector.

On the other hand, the outlook for Australia and New Zealand in the 1963-64 season is particularly bright. Output is expected to be above last year's high levels in both countries. (25)

If Kremlin Takes Wheat It Will Top Poland as Bloc User of U.S. Foods

The United States has announced that it would approve export licenses for 4 million metric tons of wheat and flour, valued at about \$250 million, to the Soviet Union.

If these sales go through, the Soviet Union will be the world's biggest *importer* of wheat this year. Normally the USSR in the third or fourth largest *exporter*.

With the proposed wheat sale, U.S. agricultural exports to the USSR would be the largest since our multi-million dollar shipments under World War II lend-lease and the U.N.'s postwar aid program.

But the U.S. and the Soviet Union have maintained a small trade in farm products for some time. The Kremlin took over \$11 million in U. S. farm products—mostly inedible tallow, hides and skins—in fiscal 1961, \$9.5 million in fiscal 1962 and about \$3 million in fiscal 1963. In each of these years our imports of farm prod-

ucts from the USSR were under \$1.5 million. These imports were chiefly cotton linters, licorice root, essential oils and bristles for brushes.

Our farm trade with Poland—not subject to the same export controls as other bloc countries—has been considerably larger. U.S. exports, running between \$70 million and \$143 million in fiscal years 1961-63, were primarily wheat, grain sorghums and cotton, shipped under the P.L. 480 program. In fact, Poland last fiscal year took over 80 per cent of the total to the entire East European bloc. (26)

Ivory Coast May Take More Rice, Wheat and Tobacco From U.S.

Early Dieppe sailors, trying to navigate the sandbars, called it the Coast of Teeth. Later, other French seamen struck up a barter trade in ivory with the natives, and mapmakers got a lasting name for a country that is today one of Africa's newer and more democratic nations.

The Ivory Coast, long part of French West Africa, became independent in 1960. From the French it inherited a coffee-oriented economy the government is now trying to diversify. But coffee is still the biggest export, cocoa second. France remains the principal market and supplier. As an African affiliate of the European Common Market, the Ivory Coast has trade advantages in all member countries.

After France, however, the United States is the Ivoiriens' best customer. In 1961, we took some 16 per cent of their coffee exports, 27 per cent of their cocoa exports, at a combined value of \$24 million.

These U.S. dollars earnings give the Ivory Coast much needed foreign exchange. On the other hand, the Ivoiriens, with trade channeled mostly toward France, don't buy much from us; agricultural imports from the U.S. were valued at only \$270,000 in 1961, the last year for which trade figures are available.

Still, things may be looking up. The country's first flour mill opened recently in Abidjan, the capital. The Ivory Coast is currently committed to buy wheat from countries in the French franc area so long as the price is not more than 5 per cent above the world market price. However, we could well supply the new mill since high quality U.S. hard wheat is better suited to the capital's humid climate than the soft wheats available from the franc area.

U.S. rice has a potentially larger market too. Rice is the Ivory Coast's most important cereal grain. In 1961 milled rice imports ran to almost 38,000 tons, of which about 5 per cent came from the U.S. Our share of the market may increase if the Ivoiriens take a liking to U.S. rice as their neighbors have in Ghana, Liberia and Guinea. The same holds true for tobacco. (27)

POLAND LED IN 1961-63 AS BIGGEST SOVIET BLOC IMPORTER OF U. S. FARM PRODUCTS

Country	U. S. exports ¹			U. S. imports ¹		
	1960-61	1961-62	1962-63 ²	1960-61	1961-62	1962-63 ²
Thousand dollars						
Albania	0	0	0	29	109	102
Bulgaria	6	6	91	948	976	861
Czechoslovakia	3,147	4,029	3,492	1,667	1,023	1,049
East Germany	1,827	1,728	2,452	8	6	13
Hungary	461	499	1,887	802	492	371
Latvia	1,889	2,816	5,976	0	0	114
Poland & Danzig	143,384	69,740	85,585	29,588	33,589	27,748
Rumania	253	216	170	1,519	495	255
USSR	11,282	9,555	3,087	1,279	1,479	1,316
Total	162,249	88,589	102,740	35,840	38,169	31,829

¹ Year beginning July 1. ² Preliminary.

Emerging Nations Need Plan To Give Farmers Incentive Along With Tools

Governments of developing countries often think that four so-called production gears are all it takes to step up farm output, and they design their development programs accordingly. Production will increase at the desired rate, they believe, if farmers get:

—The latest information, based on adequate research, on how to grow and market their crops.

—Enough good seeds, fertilizer, farm implements and similar production inputs.

—Adequate credit, under competent supervision, to tide them over until crops are harvested.

—Financial and technical help in developing such farming aids as irrigation facilities and transportation and communications systems.

But past experience in such nations as Japan, Taiwan, Mexico, and Greece—countries that have increased agricultural production markedly over the years—shows

Favorable production factors aren't enough. To raise farm output markedly, as Japan, Taiwan and Mexico have done, the entire economic climate must be favorable, a fact development planners need to consider.

	JAPAN	TAIWAN	MEXICO	CHILE	SPAIN	INDIA
PRODUCTION FACTORS						
Knowledge	😊	😊	😊	😞	😞	😞
Production goods	😊	😊	😊	😊	😊	😊
Credit	😊	😊	😊	😊	😊	😊
Investment	😊	😊	😊	😊	😊	😊
CONDITIONING FACTORS						
Land tenure	😊	😊	😊	😞	😞	😊
Farm prices	😊	😊	😊	😊	😊	😊
Markets	😊	😊	😊	😊	😊	😊
Consumer goods	😊	😊	😊	😊	😊	😊

KEY: 😊 Favorable 😊 Moderately favorable 😞 Unfavorable

that four so-called conditioning factors are just as important. Farmers have little incentive to increase farm output without:

—A system of land tenure, such as owner-operated farms, that encourage them to make long-term investments in land, buildings and equipment.

—Stable prices for farm products at a high enough level to

give them a good return on invested labor and money.

—Good markets for their products which draw them into a money economy and make them responsive to market and national needs.

—Enough consumer goods on the market to help create a willingness to work and save in order to buy them. (28)

News Pickups

SOVIET UNION. If proposed sales of 200 million bushels of U.S. wheat actually go through, most of the grain will move from U.S. warehouses to ports by rail. To move this huge amount would take perhaps 150,000 boxcar loads.

JAMAICA. Sugar growers report a record output of 535,097 short tons in 1963—that's 45,000 tons more than 1962. High yields of cane and sucrose content account for the larger output.

MEXICO. Foreign exchange reserves reached \$510 million on September 1, 1963, the highest in history and \$93 million more than on the same date in 1962.

VENEZUELA. Import duties on cotton fabric went up about 25 per cent last September to

protect local textile industries. Cotton imports have ranged from 3,200 metric tons in 1959 to 4,400 in 1962.

ECUADOR. The Ministry of Development has suspended imports of all vegetable oils and will not issue licenses until all domestically produced supplies of sesame, peanut and cottonseed oil now in storage are purchased. In 1962, about one-third of the vegetable oils imported came from the U.S.

CANADA. Wheat and wheat flour exports for the 1963-64 marketing year are expected to run about 550 million bushels. Some 240 million bushels are scheduled for Russia. Soviets will pay cash for most of the wheat.

WEST GERMANY. Light wheat flour exports to Russia from October 1963 to this March probably will reach 250,000 metric tons. (29)

Low Stocks in Importing Countries To Spur U.S. Cotton Exports in '64

Free world countries are expected to use more cotton in 1963-64 than last year. They'll build up stocks somewhat too. But production in cotton exporting countries other than the United States will probably decline.

Put together, these factors mean U.S. cotton exports are slated to climb to around 5 million bales, up from 3.4 million in 1962-63.

Not counting the United States, free world consumption of cotton

during 1963-64 is estimated at 23.7 million bales, slightly more than the previous all-time high set in 1961-62.

Production in exporting countries, again not counting the United States, will drop about 500,000 bales because yields aren't expected to match the record high of 209 pounds per acre set in 1962-63.

Foreign free world carryover of cotton—estimated at 9.2 million bales on August 1, 1963—is the smallest since 1956. Stocks in most importing countries were at near-minimum levels as the current crop year started. (30)

Japanese Minister Cites U.S. Food Aid in Nation's Rebirth, Points to Commercial Markets Opened for Our Products

Is U.S. food aid a useless give-away?

Here's how Japan's Minister of Agriculture recently put it:

—U.S. food aid since World War II brought Japan back from the brink of starvation.

—It braked inflation and paved the way for reconstruction of Japanese industry.

—It brought about a revolution in Japanese eating habits. Today his countrymen eat twice as much wheat, oil and fats, and four times as much meat as they did before the war. And they drink three times as much milk.

—All Japanese school children, some 19 million, now have a school lunch program.

—And today Japan is the world's largest buyer of American cotton, soybeans, hides and skins, tallow, nonfat dry milk, raisins and currents. What's more, Japan pays cash—\$500,000,000 a year in the last 3 years.

The minister didn't mention it, but Japan has been one of our top three cash customers for total farm exports in each of the last 12 years.

What's happened in Japan in less than 20 years will undoubtedly

be repeated in other countries that now get substantial amounts of food under U.S. government programs.

A new ERS study shows that countries increase their purchases from other countries in direct ratio to the increase in national income.

Developed countries from 1950 to 1961 stepped up national income at the rate of 6.8 per cent a year; total imports increased at exactly the same rate, agricultural imports by 4.7 per cent a year. Imports of all products from the U.S., farm and nonfarm, increased 6.5 per cent a year, almost as fast as national income, while U.S. farm imports alone rose 3.3 per cent.

In less developed countries the income growth rate was 5.2 per cent a year. Total imports increased at virtually the same rate—5.1 per cent—while farm imports went up 1.9 per cent. All goods imported from the U.S. climbed 3.8 per cent a year, but agricultural imports shot up 5.5 per cent, a rate faster even than that of national income, mostly because of shipments under our Food for Peace program. (31)

FRENCH AGRICULTURE

Some 18 months ago France passed legislation to help farmers consolidate their scattered small holdings into larger, more efficient farms.

The legislation also provided extra pensions for older farmers who want to retire. It offered training in modern farm methods to younger men who want to go into farming. On the other hand, it provided vocational training for those who want to leave the farm. (Farm INDEX, Nov. '62.)

These reforms indicate France's determination to speed the modernization of agriculture.

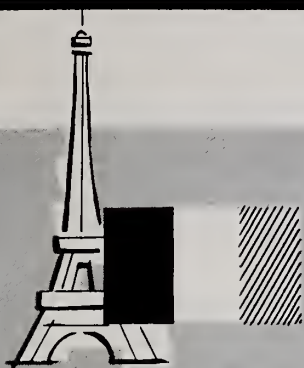
But the policy has some contradictions, apparently aimed at protecting the "family farm."

Only family farms, for example, can set up new hog or poultry enterprises or enlarge old ones. And even they can't specialize; no more than half the farm's gross earnings can come either from hog or poultry production. Any expansion at all is forbidden if it means hiring more non-family labor.

Moreover, there are absolute ceilings on the size of enterprise. This is to prevent farms from becoming big commercial operations.

It's still too early to see much progress as a result of the reforms. But the entire European Economic Community will be watching. By far the biggest agricultural member, France has almost half the Community's arable land. In 1962 France produced 43 per cent of all EEC grain. In 1961 France accounted for 35 per cent of all meat, 36 per cent of all milk and 29 per cent of all butter.

On the next page is a comparison of the relative importance of agriculture in the economy of France and the U.S. (32)

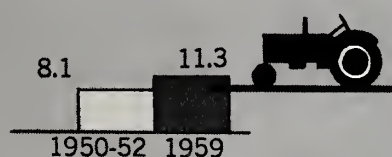
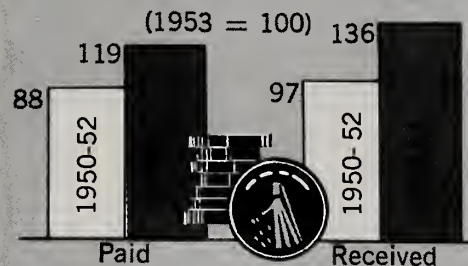


Population in Agriculture

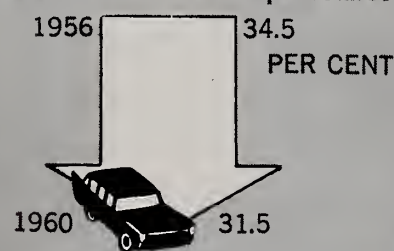
Index of Per Capita Agricultural Production
(1952/53 — 1954/55 = 100)

Capital Expenditures

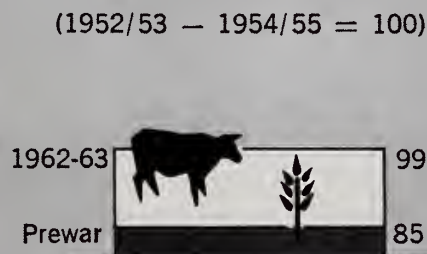
PER CENT of Gross Agricultural Product

Index of Farm Prices
(1953 = 100)

Food Share of Consumer Expenditures

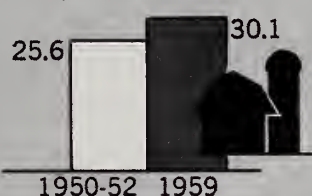
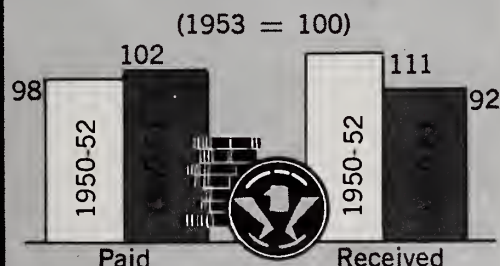


Population in Agriculture

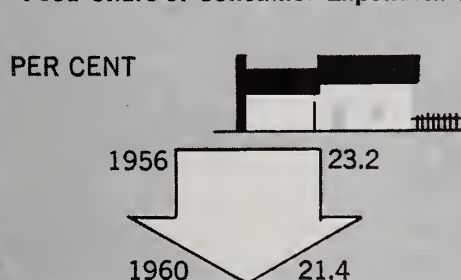
Index of Per Capita Agricultural Production
(1952/53 — 1954/55 = 100)

Capital Expenditures

PER CENT of Gross Agricultural Product

Index of Farm Prices
(1953 = 100)

Food Share of Consumer Expenditures



Small farm size, limited mechanization, retard French efforts to increase agricultural output. As a result, it takes a far larger part of the French population to produce the nation's food and fiber than it does in the United States. But the government is taking steps to consolidate and modernize farms.

French farm output, especially per capita, has gone up faster since 1953-55 than our own. One reason is that France started the period with a smaller agricultural base than we did. Another reason is that France has tried to increase production while we have sought to hold down output of some commodities.

Since U. S. farms are already heavily mechanized, our spending for machinery and other capital goods is not growing as fast on a percentage basis as it is in France. However, close to a third of our gross agricultural product is still plowed back into agriculture as capital expenditures.

French farmers now get more for their products, compared with prices of things they buy, than they did a decade ago. The opposite is true in the United States. The French government tries to hold down increases in food prices in order to prevent higher costs of goods for export and retail.

But the U. S. consumer consistently spends a smaller proportion of his income on food than the French do. One reason is our higher income. Another is the costly French merchandising system. One-stop shopping is almost unknown in France. Red meats, for example, can't be sold in general food stores; bread and pastries are available only in small bread shops.

California Law and Mothers' Urge to Buy Milk Often Spark Growth of Handy Drive-in Dairy at Expense of Retailer

It was bound to happen. First there were drive-in movies. Then drive-in restaurants. Along with drive-in banks, California has now come up with a thriving business in drive-in dairies.

In October 1952 there was one lone drive-in dairy in a 10-county area in Central California; by mid-1961 there were 72. Drive-ins got only 1 per cent of the fluid milk sales in January 1957; by January 1962 the figure had climbed to 6.4 per cent.

Back of this booming business is a California law that permits processing plants to sell milk and other dairy products for a few cents less than the grocery store price. Drive-ins qualify because they're a plant outlet.

Another factor is the change in the homemaker's shopping habits. No longer close to a small neighborhood grocer, suburban housewives tend to buy most of their groceries once a week at the nearest supermarket. But they still like to pick up fresh milk and other dairy products during the week. Open weekends and evenings, the dairy drive-ins not only

offer slightly lower prices, but greater purchasing convenience.

Most drive-ins are located at major traffic intersections in the suburbs or close to shopping centers. Motorists simply pull up to a dock where attendants quickly fill their orders, then drive on to the cashier's booth at the end of the line.

Retail grocers and other competing outlets have shown increasing concern about the inroads made in their sales by the drive-in dairies. As a result, state pricing regulations have been changed so that there's less difference between grocery store and drive-in prices. Because of this, drive-in share of milk sales dropped from 6.4 per cent in January 1962 to 5.8 per cent in January 1963. (33)

Civil Defense Study Shows 16-Day Supply of Food in Wholesale Stocks

How much food do we have? This is one of the first questions the American public would ask in any national emergency.

Civil defense planners already have most of the answers. Recent surveys of national food stocks made for civil defense officials show that:

—Almost half of us have enough food stored at home to feed the family for 14 days or more, the rest somewhat less than two weeks' supply.

—Retail stores have food on hand to last the public 15½ days.

—Wholesale warehouses have stocks for about 16 days.

Still to come is a survey of the food available in restaurants, hotels and other away-from-home eating places.

According to the wholesale study, newest in the series, warehouse stocks are not very evenly

distributed around the country. The sparsely populated Pacific Northwest and Alaska have almost a 24-day supply of food per person. The more heavily populated East Central states have food in warehouses only for 14 days.

Most foods in wholesale warehouses are types that can be kept for long periods without refrigeration. Over 84 per cent of total stocks, 13½ days' supply, is made up of canned, bottled, dried and packaged foods. Fresh foods on hand would last only about 2 days, frozen foods less than a half day.

A disproportionate amount of fresh and frozen food is on hand in New England and the Pacific Northwest. New England, with 17 per cent of total wholesale food stocks, has over 26 per cent of the total fresh supply. The Pacific Northwest, with only 5 per cent of total inventories, has more than 19 per cent of the frozen stocks.

The study shows enough beverages in warehouses to last about 4 days. Beverages are counted in terms of calories under food inventories as well as ounces under nonconcentrated fluids. The figures assume we would each get 2,000 calories a day for food and 32 ounces of liquids. (35)

Pared Facts

Slightly more pears consumed but less per person. Sounds like a riddle but it isn't. Growth in population makes the difference. Consumption of pears in the U. S. during 1959-62 averaged 5 per cent more than the total eaten in 1935-38. But on a per capita basis, use of pears during 1959-62 was 25 per cent under the prewar level. The average in recent years has been around 6.1 pounds per person (fresh and processed on a fresh equivalent).

Actually, fresh pears were the losers. In 1959-62 consumption of pears, canned alone and in fruit cocktail, accounted for over half of per capita pear consumption. (36)

Hi, Mom! I'm Hungry!

Whether you buy peanut butter for after-school snacks or astronaut lunches, you're likely to buy it in a 12-ounce jar, pay about 42 cents for it, and get a product that is nine-tenths or more ground, roasted peanuts.

In the 1960-61 crop year, the average price paid for a 12-ounce jar of peanut butter was 41.8 cents. Of this, 11.8 cents went to the farmer for the peanuts; 2.1 cents went to the peanut sheller; 15 cents went to the manufacturer; and 12.9 cents to the wholesaler and retailer.

The costs of wholesaling and retailing were figured together because so much peanut butter is sold directly to retailers by the manufacturer. (34)

RECENT PUBLICATIONS

The following publications are issued by the Economic Research Service and cooperatively by the state universities and colleges. Unless otherwise noted, reports listed here and under Sources are published by ERS. Single copies are available free from the Division of Information, OMS, U.S. Department of Agriculture, Washington, D.C. 20250. State publications (descriptions below include name of experiment station or university after title) may be obtained from the issuing agencies of the respective states.

THE PECAN NURSERY INDUSTRY—STRUCTURE AND ECONOMIC ASPECTS. Jules V. Powell, Marketing Economics Division. AER-44.

Major problems of the pecan industry include lack of information on numbers of pecan trees and the amounts of pecans that will be produced each year. The purpose of this report is to determine trends in planting pecan trees in the years ahead. Most of the nurseries that grow and sell pecan trees are in Florida, Alabama, Texas and Oklahoma. The largest nurseries, however, are in

Mississippi, Florida and New Mexico.

COMPETITIVE PRACTICES IN MARKETING FLORIDA AND TEXAS FRESH GRAPEFRUIT. William T. Manely and W. Fred Chapman, Jr., Marketing Economics Division, and Harold B. Sorenson, Texas Agricultural and Mechanical College. MRR-629.

Commercial production of grapefruit in the United States is limited to Arizona, California, Florida and Texas. Freeze disasters in Texas and Florida during the past two decades have led to tremendous instability in national grapefruit production. This study provides information about competitive practices for Florida and Texas fresh grapefruit. Its aim is to assist citrus producers and marketing agencies in both states in making long-run production and marketing decisions.

REGIONAL ANALYSIS OF PRODUCTION ADJUSTMENTS IN THE MAJOR FIELD CROPS: HISTORICAL AND PROSPECTIVE (AN APPLICATION OF SPATIAL LINEAR PROGRAMING). Alvin C. Egbert, Economic and

Statistical Analysis Division, and Earl O. Heady, Iowa State University. TB-1294.

This report summarizes an economic analysis of regional production adjustments that would maximize efficiency in the production of the major field crops. These are wheat, corn, oats, barley, grain sorghums, soybeans and cotton. One objective of the study was to measure the size of the production-consumption imbalance or adjustment gap under the regional production efficiency and other conditions of 1954. Another aim was to estimate the prospective supply and demand balance in the crops considered under projected 1965 technology and conditions allowing for increased regional efficiency of production.

THE DEMAND FOR TEXTILE FIBERS IN THE UNITED STATES. James R. Donald, Economic and Statistical Analysis Division, and Frank Lowenstein and Martin S. Simon, formerly of that division. TB-1301.

This bulletin identifies and measures the effects of the principal economic forces that cause variation in textile fiber consumption in the United States. Fibers covered by the analysis as a group are cotton, apparel wool, carpet wool and manmade fibers. The study also includes analyses of each fiber in the group except manmade fibers.

OPERATION OF THE PL 480 PROGRAM IN BRAZIL. Robert W. Johnson, Development and Trade Analysis Division. ERS—Foreign 59.

Wheat and flour accounted for 90 per cent of PL 480 exports to Brazil from July 1, 1955 through June 30, 1962. Powdered milk is being made available through grants to the Brazilian government to 3 million school children

Sources for this issue:

1. S. Stuber, W. L. Decker and F. Miller, Incidence of Drought Conditions in Southeastern Missouri (M); 2. J. C. Anderson and others (SM); 3. N. L. Ulsaker and W. B. Back, Some Evaluations of Alternative Uses of Farm Resources in the Ozark Plateau Region of Oklahoma (M); 4. D. C. Myrick, Integration of Farming and Ranching (S); 5. M. R. Jansen, J. H. Armstrong and S. T. Barber (SM); 6. V. W. Davis (SM); 7. R. R. Botts, Farmers Handbook of Financial Calculations and Physical Measurements, AH-230 (P); 8. C. P. Butler and T. A. Burch, Farming Adjustments in the Piedmont Area of South Carolina to Meet Changing Conditions, S. C. Agr. Expt. Sta. (M); 9. W. J. Lanham, Resources Required for Specified Levels of Income on Cotton Farms, Upper Coastal Plain, South Carolina, S. C. Agr. Expt. Sta., AE-242 (P); 10. Farm Mortgage Lending, FML-9 (P); 11. How to Use Farm Income Statistics, MP-920 (P) and Mardy Myers (SM); 12. V. L. Hulburt, Use of Farm Resources as Conditioned by Tenure Arrangements (M); 13. Farm Real Estate Taxes, RET-3 (P); 14. L. J. Ducoff, School Dropout Rates Among Farm and Nonfarm Youth (M); 15. W. Burkett, Income Problems of Rural Families in South Central Kentucky (M); 16. G. F. Vaughn and E. C. Moore, An Economic Analysis of Privately Owned Tracts of Idle Land in Suburban Northern New Castle County, Delaware (M); 17. F. T. Bachmura, Conditions Conducive to Economic Development in Local Areas (M); 18. W. Bauder, The Concept of Retirement Among Farm Operators in South

Dakota (M); 19. H. A. Steele, Research in Economics of Watershed and River Basin Development Programs (S); 20. W. T. Wesson, Taxes in Food Marketing (M); 21. H. Trelogan, The Wide, Wide World of Marketing (S); 22. S. H. Holder and O. L. McCaskill, Electric Power and Drier Fuel Costs for Mid-South Cotton Gins, ERS-138 (P); 23. R. A. Dietrich, W. F. Williams and J. A. Miller, The Texas-Oklahoma Meat Industry, Structure and Marketing Practices, AER-39 (P); 24. Morris W. Sills, Domestic Markets for Hides and Leather (S); 25. Regional Analysis Division, World Agricultural Situation, 1964 (P); 26. A. D. Angelidis and R. L. Tontz, "U. S. Trade with the European Soviet Bloc," Foreign Ag. Trade, Oct. '63 (P); 27. S. W. Skinner, The Agricultural Economy of the Ivory Coast (M); 28. F. W. Parker and W. E. Hendrix, Foundations for Agrarian Development (S); 29. Development and Trade Analysis Division (SM); 30. Cotton Situation, CS-208 (P); 31. R. Christensen and A. Mackie, "Foreign Economic Development and Agricultural Trade," For. Agr. Trade, Sept. '63 (P); 32. G. R. Samson (SM); 33. J. E. Klein and L. R. Grav, Drive-in Dairies in Central California (M); 34. V. M. Farnworth, Prices, Marketing Margins and Uses of Peanuts in Peanut Butter (M); 35. M. Van Dress, Estimated Number of Days' Supply of Food and Beverages in Warehouses at Wholesale, 1963, MRR-632 (P); 36. Fruit Situation, TFS-147 (P).

Speech (S); published report (P); manuscript in process (M); special material (SM).

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and 885,000 pregnant and nursing mothers, infants and children of preschool age. In addition, non-profit agencies are providing powdered milk, beans, corn, salad oil and other commodities to 3.0 million people including 0.7 million school children.

PACKING MATURE GREEN TOMATOES: QUALITY, COSTS, AND MARGINS IN THE LOWER RIO GRANDE VALLEY OF TEXAS. Robert W. Bohall and Joseph C. Podany, Marketing Economics Division, and O. P. Farrish. MRR-635.

Harvest of mature green tomatoes in the Lower Rio Grande Valley starts in April and ends in June. This report discusses pricing efficiency of the market with respect to variations in quality of tomatoes. The Lower Valley tomato market apparently performs efficiently in adjusting margins for changes in costs due to quality from one week to the next. It performs somewhat less efficiently in adjusting margins over daily time periods.

MONETARY EFFECTS OF FINANCING AGRICULTURAL EXPORTS THROUGH PROGRAMS UNDER TITLES I AND IV, PUBLIC LAW 480. Warrick E. Elrod, Jr., Development and Trade Analysis Division. FAER-12.

Two methods of financing government-to-government sales of surplus agricultural commodities under Public Law 480 are analyzed in this report. They are: Sales for local currency under Title I, and sales for deferred dollar payment under Title IV. The report shows that Title I is likely to be more beneficial to the recipient country if: (1) official U.S. expenditures within the country are small; (2) expected earnings of dollar or other convertible exchange are meager; and (3) payment in local currency can be made without causing instability in prices. The Title IV method is more favorable to the recipient country if official U.S. expenditures are large enough to provide it with a net dollar surplus after deferred dollar payment for the commodities.

ESTIMATED NUMBER OF DAYS' SUPPLY OF FOOD AND BEVERAGES IN WAREHOUSES AT WHOLESALE, 1963—A CIVIL DEFENSE STUDY. Michael G. Van Dress, Marketing Economics Division. MRR-632.

For each person in the United States there is a 16.1 days' supply of food and a 4 days' supply of beverages in warehouses at the wholesale level. Most food on

hand in wholesale warehouses can be kept for a long period without refrigeration. Canned, bottled, dried, and packaged products represent 13.6 days' supply or over 84 percent of total stocks. Fresh food accounts for 2.2 days' and frozen food 0.4 days' supply. Stocks are shown for the eight civil defense regions.

APPLE MARKETING—A REVIEW OF ECONOMIC RESEARCH, 1945-1960. Alfred J. Burns, Marketing Economics Division; George R. Rockwell, Economic and Statistical Analysis Division; and Elton Thigpen. ERS-140.

Apples are produced commercially in 34 states. The four main areas are the Pacific Northwest, the Midwest, the New York-New England, and the Appalachian. The Pacific Northwest produces the largest volume, with Washington producing about one-fifth of the total commercial crop. Commercial production of apples in the U. S. has been increasing in the postwar years, especially since the mid-1950s. However, per capita consumption is down considerably from the 1920s. There has been a trend to consume more canned apples and applesauce and less fresh and dried apples.